AMENDMENTS TO THE SPECIFICATION:

Please amend the paragraph beginning at page 3, line 22, as follows:

One way to circumvent, or at least reduce, the ISI and ICI in a DMT-based system is to add a cyclic prefix (guard time) to the beginning of each transmitted DMT symbol. The cyclic prefix (CP) is a mechanism to make the subchannels independent of each other, or in other words, memory-less. A cyclic prefix of L samples means that the last L samples of the N samples long time domain symbol is copied to the beginning of the time domain symbol. Thus, the total length of the prefixed time domain symbol is samples. Figure ~~3~~ 2 illustrates the cyclic prefixing.

Please amend the paragraph beginning at page 12, line 19, as follows:

Fig. 4 shows a transceiver using Discrete Multitone (DMT) as a modulation scheme with a first, non-limiting, example embodiment of a matrix-based frequency domain echo canceller (MBAEC) structure. There are two complex matrices Hi and Wi , numbered 62 and 64, respectively. Each matrix has a size of (N x N), where N is the size of the IDFT and DFT. The received echo signal is estimated in the frequency domain by multiplying the matrix Hi with the currently transmitted frequency domain symbol (an N x 1 vector), Xi, output by the encoder, and multiplying the matrix Wi with the previously transmitted frequency domain symbol (an N x 1 vector), Xi-1, ~~ou tput~~ output from delay 60. The two products Hi Xi and WiXi-1 are added together, i.e.,

Please amend the paragraph beginning at page 13, line 9, as follows:

The estimated echo signal is subtracted from the received frequency domain symbol, and the resulting error vector $\mathbf{E}_i = \mathbf{Y}_i - \boxminus \underline{\hat{Y}_i(k)}$ is used by an adaptive algorithm, e.g., Least Mean Square (LMS), to adjust the matrix elements of $\mathbf{H}_i$ and $\mathbf{W}_i$. In regular operation, (after training) the error signal is also the desired data signal. Adjusting $\mathbf{H}_i$ and $\mathbf{W}_i$ with the LMS-algorithm yields:

A3